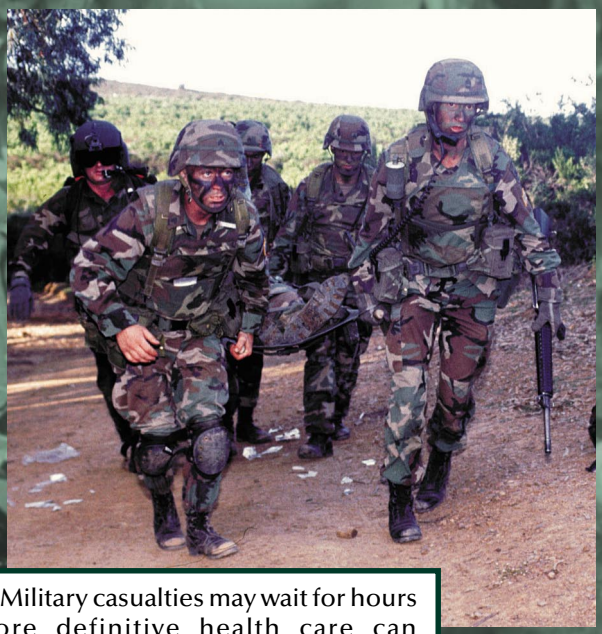
Combat Casualty Care Research Program

MISSION: To reduce the mortality and morbidity resulting from injuries on the battlefield through the development of new lifesaving strategies, new surgical techniques, biological and mechanical products, and the timely use of telemedicine technologies.



Military casualties may wait for hours before definitive health care can be provided. Initial treatment and subsequent evacuation occur in austere environments characterized by limited supplies and limited diagnostic and life-support equipment. Provision of acute and critical care is labor intensive and must frequently be provided by non-physician medical personnel. The primary challenge for combat casualty care research is to overcome these limitations by providing biologics, pharmaceuticals, and devices that enhance the capability of first responders to effectively treat casualties as close to the geographic location and time of injury as possible.

Research efforts address:

- Products and methods that will reduce the number of battlefield deaths due to hemorrhage;
- Advanced, noninvasive physiologic sensors for detecting penetrating or blunt trauma wounding events and remote triage;
- Technologies to improve the acquisition and availability of blood products;
- Prevention and/or treatment of dental disease and battlefield oral and maxillo-facial injuries;
- Surgical techniques, equipment, and implants to address extremity/musculo-skeletal injuries;
- Neuroprotective treatment strategies for brain and spinal cord injuries; and
- Strategies and diagnostics for resuscitation to improve survival when evacuation is delayed and resources are limited.

The all-electric field dental set provides treatment capability equal to or greater than the present capability with reduced equipment cost. Also, by eliminating the need for a 5 kilowatt generator, each Dental Support Unit will be 24 tons lighter and 18 vehicles (trailers) smaller.